

WHAT IS CLAIMED IS:

1. A resistive composition comprising:

a conductive metal powder containing at least either a first mixed powder, an alloy powder, or a second mixed powder, said first mixed powder
5 being made of copper powder, manganese powder, and tin powder, said alloy powder being made of copper, manganese, and tin, and said second mixed powder being made of said first mixed powder and said alloy powder;

glass powder;

copper-oxide powder; and

10 vehicle containing resin and solvent.

2. The resistive composition according to Claim 1, wherein said conductive metal powder, said glass powder, and said copper-oxide powder are free of lead and cadmium.

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3. The resistive composition according to Claim 1, wherein said copper oxide is made of either CuO or Cu₂O.

4. A resistive composition comprising:

20 a mixture of a conductive metal powder made by mixing 85 to 94 percent by weight of copper powder, 5 to 10 percent by weight of manganese powder, and 1 to 5 percent by weight of tin powder; a mixture of 3 to 7 percent by weight of glass powder and 3 to 7 percent by weight of copper-oxide powder relative to the entire amount of said conductive metal powder; and 7 to 15
25 percent by weight of vehicle relative to the entire amount of said conductive

metal powder and said mixture.

5 5. The resistive composition according to Claim 4, wherein said conductive metal powder, said glass powder, and said copper-oxide powder are free of lead and cadmium.

6. The resistive composition according to Claim 4, wherein said copper oxide is made of either CuO or Cu₂O.

10 7. A resistor using a resistive composition as a resistive element, wherein said resistive composition comprising a conductive metal powder containing at least either a first mixed powder, an alloy powder, or a second mixed powder, said first mixed powder being made of copper powder, manganese powder, and tin powder, said alloy powder being made of copper, manganese, and tin, and
15 said second mixed powder being made of said first mixed powder and said alloy powder; glass powder; copper-oxide powder; and vehicle containing resin and solvent.

8. The resistor according to Claim 7, wherein said conductive metal powder,
20 said glass powder, and said copper-oxide powder are free of lead and cadmium.

9. The resistor according to Claim 7, wherein said copper oxide is made of either CuO or Cu₂O.

25 10. A resistor using a resistive composition as a resistive element, wherein

said resistive composition is a mixture of a conductive metal powder made by mixing 85 to 94 percent by weight of copper powder, 5 to 10 percent by weight of manganese powder, and 1 to 5 percent by weight of tin powder; a mixture of 3 to 7 percent by weight of glass powder and 3 to 7 percent by weight of copper-oxide powder relative to the entire amount of said conductive metal powder; and 7 to 15 percent by weight of vehicle relative to the entire amount of said conductive metal powder and said mixture.

11. The resistor according to Claim 10, wherein said conductive metal powder, said glass powder, and said copper-oxide powder are free of lead and cadmium.

12. The resistor according to Claim 10, wherein said copper oxide is made of either CuO or Cu₂O.

13. A making method of a resistive composition, comprising:

a first step of making a conductive metal powder by mixing 85 to 94 percent by weight of copper powder, 5 to 10 percent by weight of manganese powder, and 1 to 5 percent by weight of tin powder;

a second step of making a mixture of 3 to 7 percent by weight of glass powder and 3 to 7 percent by weight of copper-oxide powder relative to the entire amount of said conductive metal powder obtained in said first step; and

a third step of making 7 to 15 percent by weight of vehicle relative to the entire amount of said conductive metal powder and said mixture obtained in said first and second steps.

14. The making method of the resistive composition according to Claim 13, wherein said conductive metal powder, said glass powder, and said copper-oxide powder are free of lead and cadmium.

5 15. The making method of the resistive composition according to Claim 13, wherein said copper oxide is made of either CuO or Cu₂O.

16. A making method of a resistor, comprising:

a step of weighing metal components of copper, manganese, and tin;

10 a step of forming a resistive element comprising a conductive metal powder which contains at least either a first mixed powder, an alloy powder, or a second mixed powder, said first mixed powder being made of copper powder, manganese powder, and tin powder, said alloy powder being made of copper, manganese, and tin, and said second mixed powder being made of said first
15 mixed powder and said alloy powder; glass powder; copper-oxide powder; and vehicle containing resin and solvent; and

a step of forming said resistive element upon an insulating substrate.

17. The making method of the resistor according to Claim 16, wherein said
20 conductive metal powder, said glass powder, and said copper-oxide powder are free of lead and cadmium.

18. The making method of the resistor according to Claim 16, wherein said copper oxide is made of either CuO or Cu₂O.

19. A making method of a resistor, comprising:

a step of weighing metal components of copper, manganese, and tin;

a step of forming a resistive element comprising a mixture of a
conductive metal powder made by mixing 85 to 94 percent by weight of copper
5 powder, 5 to 10 percent by weight of manganese powder, and 1 to 5 percent by
weight of tin powder; a mixture of 3 to 7 percent by weight of glass powder and
3 to 7 percent by weight of copper-oxide powder relative to the entire amount
of said conductive metal powder; and 7 to 15 percent by weight of vehicle
relative to the entire amount of said conductive metal powder and said
10 mixture; and

a step of forming said resistive element upon an insulating substrate.

20. The making method of the resistor according to Claim 19, wherein said
conductive metal powder, said glass powder, and said copper-oxide powder are
15 free of lead and cadmium.

21. The making method of the resistor according to Claim 19, wherein said
copper oxide is made of either CuO or Cu₂O.